

**Narragansett Bay Commission
Docket No. 3483
Direct Testimony of Alberico Mancini**

1

2 Q. PLEASE STATE YOUR NAME AND ADDRESS.

3

4 A. My name is Alberico Mancini and my business address is the Division of Public
5 Utilities and Carriers ("Division"), 89 Jefferson Boulevard, Warwick, RI 02888.

6

7 Q. WHAT IS YOUR POSITION AT THE DIVISION?

8

9 A. I am a Public Utilities Engineering Specialist II for the Division. I have been
10 employed in this position since February of 1999.

11

12 Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

13

14 A. I graduated from the University of Rhode Island with a Bachelor of Science
15 degree in Civil Engineering.

16

17 Q. PLEASE INDICATE YOUR CERTIFICATIONS AND PROFESSIONAL
18 MEMBERSHIPS.

19

20 A. I currently hold an Engineer-In-Training Certificate. I am a member of the
21 American Water Works Association (AWWA), New England Water Works
22 Association (NEWWA), and the Rhode Island Water Works Association
23 (RIWWA).

24

25 Q. PLEASE DESCRIBE YOUR EMPLOYMENT BACKGROUND.

26

27 A. Prior to accepting my current position with the Division, I was employed with
28 Pare Engineering Corporation from 1997 to 1999 as an environmental engineer
29 assisting in the evaluation and design of water distribution systems and storage

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1 facilities throughout Rhode Island. I also inspected several capital improvement
2 projects that involved the installation of 12” and 16” water transmission mains,
3 and its interconnections.
4

5 Prior to my employment at Pare Engineering Corporation, I was employed with R.
6 Zoppo Corporation from 1995 to 1997 as a field engineer inspecting and
7 supervising water, sewer, and drainage projects throughout Rhode Island and
8 Massachusetts. I also estimated utility contracts involving water and sewer main
9 installation.
10

11 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE RHODE ISLAND
12 PUBLIC UTILITIES COMMISSION (PUC)?
13

14 A. Yes. I have provided direct testimony in Docket No. 2904 concerning the request
15 of the Woonsocket Water Department (“WWD”) request for IFR funding, Docket
16 No. 2961 concerning Providence Water Supply Board’s request for IFR funding,
17 Docket No. 2969 related to Prudence Island Utilities Corporation’s moratorium on
18 new service connections, Docket No. 2985 concerning Newport Water Division’s
19 request for IFR/CIP funding, Docket No. 3162 regarding Narragansett Bay
20 Commission’s capital improvement projects, Docket No. 3164 relating to
21 Pawtucket Water Supply Board’s request for IFR funding, and in Docket No.
22 3409 regarding Narragansett Bay Commission’s Combined Sewer Overflow
23 (CSO) Project.
24

25 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?
26

27 A. The purpose of my testimony is to update the Public Utilities Commission on the
28 Division’s findings relating to Narragansett Bay Commission’s CSO project, and

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1 also to address Narragansett Bay Commission's Improvements to the Bucklin
2 Point Wastewater Treatment Facility.

3

4 Q. WHAT STEPS HAS THE DIVISION TAKEN TO MONITOR NBC'S CSO
5 PROJECT?

6

7 A. I have been personally attending weekly progress meetings and have been visiting
8 each construction site weekly for all contracts that are currently under
9 construction.

10

11 Q. WHAT INFORMATION HAVE YOU OBTAINED BY INITIATING THESE
12 STEPS IN MONITORING NBC'S CSO PROJECT?

13

14 A. By attending weekly progress meetings, the Division is directly informed of any
15 construction problems, design changes, delays or change orders. Site visits
16 provide the Division with visual construction progress for each contract. Monthly
17 payment applications and approved change orders for each construction contract
18 are obtained and reviewed. This information is included in a quarterly report,
19 which is submitted to the Division Administrator and a copy is given to the Public
20 Utilities Commission. I have attached a copy of my latest quarterly update dated
21 2/12/03 (Attachment-1).

22

23 Q. DURING YOUR MONITORING OF THE CSO PROJECT, HAVE THERE
24 BEEN ANY CHANGES OR DELAYS THAT HAVE INCREASED THE
25 OVERALL COST ESTIMATE?

26

27 A. Yes. There have been changes within the last two years, which have directly
28 influenced NBC's CSO construction cost estimate. NBC has testified previously
29 (Docket No. 3409) that their revised construction cost estimate based on final

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1 design was \$275 million. As the contracts were advertised for bid and awarded to
2 the lowest qualified bidders, the construction cost estimate was adjusted to reflect
3 the awarded contract bid quote. To date, some contracts have been awarded
4 above the engineer's estimate while other contracts have been awarded below the
5 engineer's estimate. Each contract is dependent upon the complexity of the
6 project and current economic conditions. There have been five (5) contracts
7 awarded within the last year that have resulted in a 3% increase of the total
8 construction cost estimate.

9 Several change orders have been approved for these contracts currently under
10 construction. Some have increased original contract amounts while others have
11 resulted in a credit to the original contract amount. As change orders are
12 approved, the construction cost estimate is again adjusted to reflect the increase or
13 decrease in cost. To date, all approved change orders have resulted in a net
14 decrease in costs from the original contract bids.

15

16 Q. WHAT IS THE MOST RECENT CONSTRUCTION COST ESTIMATE FOR
17 PHASE I OF THE CSO PROJECT AS A RESULT OF THESE CHANGES?

18

19 A. The most recent construction cost estimate for Phase I is \$281,751,638, which is
20 based on management and insurance costs, actual costs for the two (2) completed
21 projects, actual bids received for the four (4) awarded projects currently under
22 construction, changes due to change orders and estimated costs for the six (6)
23 remaining contracts. A breakdown of the construction contracts and cost
24 estimates is included in Attachment-2.

25

26 Q. COULD YOU FURTHER EXPLAIN WHAT IS INCLUDED IN YOUR COST
27 ESTIMATE BREAKDOWN?

28

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1 A. The Division lists each contract along with the construction cost estimate, actual
2 construction costs expended to date, NBC's actual capitalized in-house
3 engineering, land purchases, and other administrative costs to date, and total cost
4 expended to date. The total construction cost estimate changes with actual
5 contract bids that are awarded and also changes with the approval of each contract
6 change order. The total construction cost estimate should be referenced when
7 comparing to Louis Berger Group's current construction cost estimate. NBC's
8 capitalized in-house costs are not included in the actual construction cost estimate
9 that has been referred to in previous Commission Dockets and therefore have been
10 listed separately. NBC has estimated that their capitalized in-house costs and land
11 costs will be approximately \$5.7 million for all of Phase I.

12
13 Q. PAGE THREE OF MR. PRATT'S PREFILED TESTIMONY REVEALS THAT
14 PROJECT 302.05 – FLOATABLES CONTROL DEMONSTRATION
15 FACILITY HAS BEEN INCLUDED AS PART OF NBC'S PHASE I CSO
16 PROJECT. IN YOUR VIEW, IS THIS PROJECT APPROPRIATELY
17 INCLUDED IN PHASE I OF NBC'S CSO PROJECT?

18
19 A. The Division believes that this project should not be included as part of NBC's
20 Phase I CSO Project. The Department of Environmental Management (RIDEM)
21 has required NBC to install these floatable collection facilities at all Phase II and
22 Phase III CSO locations as discussed on pages 5-6 of Mr. Brueckner prefiled
23 testimony. Project 302.05 was constructed to demonstrate how well these
24 collection facilities would perform. As a result, per RIDEM, these facilities will
25 be installed at 40 other locations and the project is estimated at \$17.5 million.
26 Project 302.05, although classified as a CSO project, was never included in the
27 Phase I construction cost estimate and should not be included in the current
28 construction cost estimate. The project is distinct and separate from Phase I of
29 NBC's CSO Project.

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1

2 Q. WILL THE DIVISION CONTINUE TO MONITOR THE CONSTRUCTION
3 PROGRESS AND COST ESTIMATES FOR THE CSO PROJECT?

4

5 A. Yes. The Division will continue to attend weekly progress meetings, review
6 payment requests and visit each construction site through the completion of Phase
7 I of NBC's CSO Project.

8

9 Q. NBC HAS INITIATED THE REHABILITATION OF THEIR BUCKLIN POINT
10 TREATMENT FACILITY. ARE YOU FAMILIAR WITH THIS PROJECT?

11

12 A. Yes. The Division has not monitored this project on a weekly basis as the CSO
13 project but I have recently visited the facility and reviewed recent payment
14 applications and progress meeting minutes.

15

16 Q. WHAT HAVE YOU REVEALED FROM YOUR RECENT SITE VISIT AND
17 REVIEW OF THE BUCKLIN POINT TREATMENT FACILITY
18 IMPROVEMENT PROJECT?

19

20 A. J.L. Marshall & Sons, Inc had been selected as the lowest qualified contractor
21 who began construction in March of 2002. Construction has been ongoing with
22 approximately 35% of the construction completed. A copy of the latest progress
23 meeting minutes is attached (Attachment-3). There have been 93 change order
24 requests to date, which have resulted in two approved change orders (Attachment-
25 4). Many of the requests have been denied or withdrawn but the approved
26 requests have resulted in credits given to NBC. The first change order combined
27 five (5) change order requests into one approved change order which resulted in a
28 decrease of \$394,191 to the original contract. The second change order combined

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1 thirteen (13) change order requests into one approved change order, which
2 resulted in an increase of \$46,887 to the original contract.

3 The original contract amount had been \$58,549,001 but as a result of the change
4 orders, the current contract amount has decreased to \$58,201,697 of which
5 \$19,390,156 has been paid to date. A copy of the latest payment application is
6 attached (Attachment-5).

7

8 Q. WHAT IS YOUR CONCLUSION UPON COMPLETING YOUR REVIEW OF
9 NBC'S BUCKLIN POINT TREATMENT FACILITY IMPROVEMENTS
10 PROJECT?

11

12 A. Based on my review, the Bucklin Point Treatment Facility Improvement Project is
13 currently within budget and is scheduled to be completed on time.

14

15 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

16

17 A. Yes, it does.

NARRAGANSETT BAY COMMISSION

COMBINED SEWER OVERFLOW

CSO

PROJECT

QUARTERLY UPDATE

February 12, 2003

Division of Public Utilities and Carriers

Memo

To: Thomas Ahern, Administrator – Division of Public Utilities and Carriers
From: Alberico Mancini, Public Utilities Engineering Specialist
Date: 3/12/2003
Re: Narragansett Bay Commission CSO Project

This is a quarterly update regarding the status of NBC'S Combined Sewer Overflow (CSO) Project.

Contract 302.04C - Moshassuck River Interceptor Relief Project.

Construction is 100% complete and the facility has been turned over to NBC. The project was completed in late October of 2002 and the last weekly progress meeting was held on 10/9/02. Weekly progress meeting minutes are attached (AM-1). Final contract costs paid to Rocchio Corp totaled \$4,479,686.27. The total amount paid to Rocchio Corp is currently less than the original contract bid of \$4,536,201 which was increased to \$4,656,201 due to the contractor's only approved change order. Liquidated damages retained by NBC, due to the late completion, were adjusted to reflect actual damages incurred by NBC totaling \$165,454. Final payment included the 10% retainage withheld throughout the contract. A copy of the last payment application is attached (AM-2). Actual contract costs may have been below the original contract bid amount do to NBC withholding liquidated damages but construction management and NBC administrative costs increased due to the delay. In addition to the contractor's construction costs, construction management costs totaling \$962,135 have been included in the construction costs for this contract only (see AM-3). Costs expended to date including NBC's capitalized in-house engineering costs, land purchases and other administrative costs total \$5,634,539.

There are several change order requests submitted by Rocchio Corp that remain unresolved. Attached is a letter from Rocchio Corp to Gilbane/Jacobs detailing each request and a response from Gilbane/Jacobs for each request (AM-4). Most of the change order requests by Rocchio Corp have been denied but there are some currently being reviewed that may result in additional change orders, which could increase the total construction cost of the contract roughly \$100,000 to \$200,000.

Although the project encountered several problems throughout construction which delayed the project over three months, the facility was completed according to NBC's specifications and total costs for the project should fall well within NBC's 10% contingency factor.

Contract 302.06C – Main Spine Tunnel and Ancillary Facilities

Construction continues at the work site located between Ernest Street and Terminal Road. The main shaft (S-1) has been excavated to elevation –150 ft which is top of bedrock. The contractor is now preparing to slip line the shaft with concrete. As the lining is completed, the contractor will begin blasting through the bedrock to elevation –267 ft. The utility shaft freeze wall is completed and excavation should begin soon. As the S-1 shaft lining is completed, the freeze plant will be transferred to the access shaft freeze pipes. The Tunnel Boring Machine (TBM) arrived in port on 2/4/03 and has been delivered to the site. Weekly progress meeting minutes are attached (AM-5).

The contractor encountered some difficulty during the freezing of the S-1 shaft. The freeze wall surrounding the S-1 shaft was expected to close within six to eight weeks but unexpected groundwater flow hindered the freezing process. After installing additional freeze pipes and grouting specific areas, the contractor was able to stop the ground water flow enough for the shaft wall to properly freeze after a four (4) month period. The contractor has submitted notification of a potential differing site condition (DSC) due to the groundwater flow. To date, no single conclusive DSC has been identified but the investigation by Gilbane/Jacobs and Louis Berger will continue during the excavation.

The contractor has submitted eight (8) additional change order requests of which one has been withdrawn. A complete listing of all change order requests are listed in the weekly progress meeting minutes (AM-5). NBC has only approved two of the additional requests. The first resulted in an increase of \$2,816 due to the installation of a vibrating piezometer in lieu of a specified and approved piezometer in the contract. The second resulted in an increase of \$5,129 for asbestos found in a small building, which was scheduled for demolition. The two requests were both approved as a single change order (CO-2) by NBC resulting in an increase of \$7,945. A copy of CO-2 is attached (AM-6).

The contractor's previous concern regarding the configuration and safety of the tunnel pump station cavern has been addressed by the structural report performed by Golder Associates. The contractor has been provided a package of design changes for additional support and has been requested to provide a cost proposal.

Additional change order requests include a substance abuse program, an additional increase in the special waste allowance due to increase in contaminated soil encountered, and disposal costs due to high levels of arsenic concentrations found in the S-1 shaft soil.

Cost estimates have not yet been submitted by the contractor but these requests, if approved, could result in significant cost increases.

Total approved change orders to date have resulted in a reduction of \$1,203,517 from the original contract.

The Disputes Resolution Board (DRB) held its third meeting on December 12, 2002. Meeting minutes detailing the second DBR meeting were distributed and reviewed. Meeting minutes for the second and third DBR meetings are attached (AM-7). The DRB members were given a construction update and reviewed all change order requests. The next meeting is scheduled for March 6, 2003.

Total work completed through 1/10/03 is \$23,225,469, which has been paid to the contractor. The most recent payment application is attached (AM-8). NBC is not withholding the 10% retainage on each payment application but the contractor has substituted securities equal to or greater than 10% of the total work completed to date. Costs expended to date (see attachment AM-3) including NBC's capitalized in-house engineering costs, land purchases and other administrative costs total \$23,360,541.

Contract 302.07C – Foundry Work Site Demolition Project

Demolition began at the site in November of 2002. The contractor is approximately 100% complete with the demolition and the final clean up is scheduled to be completed by 2/28/03. Weekly progress meeting minutes are attached (AM-9).

There have been four (4) change order requests, which should result in a small reduction of the original contract amount.

Total work completed through 1/8/03 is \$339,537 less a 10% retainage by NBC leaving \$305,583 paid to Fleet Industrial Services. A copy of the latest payment application is attached (AM-10). Costs paid to date (see attachment AM-3) including NBC's capitalized in-house engineering costs, land purchases and other administrative costs total \$313,031.

Contract 302.08C – Overflows 004/061 Facilities

Construction continues throughout the site along Allens Ave in Providence. Work completed to date includes earth support throughout the site, bypassing other utilities and constructing temporary traffic lanes. The contractor is currently excavating and installing bracing for earth support at each proposed structure location. Hayward Baker, who was hired by R.P. Iannuccillo as a sub-contractor, has started in on the jet grouting. Weekly progress meeting minutes are attached (AM-11). This project is scheduled to be completed in the fall of 2003.

The contractor has submitted eighteen (18) change order requests of which two (2) have been withdrawn. A complete listing of all change order requests are listed in the weekly progress meeting minutes (AM-11). NBC has denied two (2) of the requests for lack of merit but has approved two (2) of the other requests. Change order (CO-1) resulted in an increase of \$32,879 due to the installation of an additional northbound lane requested by RI Department of Transportation. A copy of CO-1 is attached (AM-12). The second resulted in a decrease of \$58,524 due to a reduction in the allowance to relocate overhead power lines, which was prepaid by NBC. The change order request was approved but will be included in the next change order.

Six (6) other change order requests have been agreed upon but pricing for each request is currently being negotiated. The remaining four (4) requests are currently being reviewed for merit by NBC.

Cost estimates have not yet been agreed upon by NBC but the requests, if approved, could result in significant cost increases.

Total approved change orders to date have resulted in a reduction of \$25,645 from the original contract.

Total work completed through 1/22/03 is \$1,276,609 less a 10% retainage by NBC leaving \$1,148,948 paid to R.P. Ianuccillo to date. The last payment application is attached (AM-13). Costs expended to date (attachment AM-3) including NBC's capitalized in-house engineering costs, land purchases, and other administrative costs Total \$1,324,012.

Contract 302.11C – Woonasquatucket Interceptor Relief Facilities

This contract is currently out for bid with a bid opening scheduled in March 2003. The project consists of a diversion chamber, grit and screening structure, consolidation piping, and drop shaft to the tunnel. The engineer's construction cost estimate for the project is \$4,025,000.

Contract 302.15C – Overflows 006/007 Facilities

Bids for Contract 302.15C – Overflow 006/007 Facilities were received on 9/30/02. The low bid of \$8,894,444 was submitted by Barletta Heavy Division, Inc from Massachusetts. There were six (6) other contractors submitting bids of which varied between \$9 million and \$13 million. The low bid was approximately 25% less than the average bid but was 8.5% greater than the Engineer's Estimate of \$8,186,000. Louis Berger Group (LBG) has evaluated Barletta Heavy Division's qualifications, bid proposal, and references for the purpose of establishing the firm's capability to successfully complete this construction project. LBG concluded that Barletta Heavy Division was the lowest respectable bidder. A copy of LBG's letter of recommendation is attached (AM-14). The contract was then awarded to Barletta Heavy

Division in October of 2002 and a pre-construction meeting was held on 12/9/02. Meeting minutes for the pre-construction meeting are attached (AM-15).

Barletta Heavy is planing to begin mobilizing soon and the first progress meeting in scheduled for 2/20/03.

Contract 302.20 – Land Acquisition – RI Department of Transportation

Construction is 100% complete on the new RIDOT Maintenance Facility in Warwick. NBC has been reimbursed by RIDOT for all construction payments issued in excess of NBC's \$3,000,000 obligation. The facility was completed on schedule and RIDOT has occupied the facility.

Costs expended to date (attachment AM-3) including NBC's capitalized in-house engineering costs, land purchases, and other administrative costs total \$3,054,085.

Construction costs for Phase I are currently estimated at \$281,751,638. This estimate may increase or decrease as the remaining contracts are awarded. The cost estimate will also be adjusted to reflect any future approved change orders. Costs expended to date including NBC's capitalized in-house engineering costs, land purchases, and other administrative costs total \$45,311,112.

Based on my review to date, I believe that NBC's CSO projects in progress are within budget. While some individual projects include several pending change order requests which may result in project cost increases, I am of the opinion that the increases will be due to unforeseen conditions and are within NBC's 10% contingency factor included in each projects cost estimate. LBG and NBC carefully review each change order request and will deny any request that does not hold merit. Changes to date have not caused any major concerns and in some cases, they have actually decreased the contract amount.

The Division will continue monitoring Phase I of the CSO Project and will provide quarterly reports as well as updated project costs.

Cc: Chairman Elia Germani

LIST OF ATTACHMENTS

1. Contract 302.04C Weekly Progress Meeting Minutes	AM-1
2. Contract 302.04C Payment Application No.18.....	AM-2
3. CSO Phase I Construction Cost Estimate	AM-3
4. Contract 302.04C Claims Request and Gilbane/Jacobs Response.....	AM-4
5. Contract 302.06C Weekly Progress Meeting Minutes.....	AM-5
6. Contract 302.06C Change Order No.2.....	AM-6
7. Contract 302.06C DBR Meeting Minutes	AM-7
8. Contract 302.06C Payment Application 12.....	AM-8
9. Contract 302.07C Weekly Progress Meeting Minutes.....	AM-9
10. Contract 302.07C Payment Application 3.....	AM-10
11. Contract 302.08C Weekly Progress Meeting Minutes.....	AM-11
12. Contract 302.08C Change Order No.1.....	AM-12
13. Contract 302.08C Payment Application 7.....	AM-13
14. Contract 302.15C Letter of Recommendation.....	AM-14
15. Contract 302.15C Pre-construction Meeting Minute.....	AM-15

NARRAGANSETT BAY COMMISSION PHASE I CSO PROJECT - CONSTRUCTION ESTIMATE

Project Number	Project Name	Contract awarded	Construction Cost Estimate	Construction Costs Paid to Date	NBC Admin./ Land/Other Paid to Date	Total Paid as of (2/7/03)
Contract 302.03RS	Phase I CSO Facilities - Program and Construction Management	Yes	\$ 30,250,000	\$ 4,811,561	-	\$ 4,811,561
Contract 302.04C	Phase I CSO Facilities - MRI	Yes	\$ 5,441,821	\$ 5,441,821	\$ 192,718	\$ 5,634,539
Contract 302.06C	Phase I CSO Facilities - Main Spine and Ancillary Facilities	Yes	\$ 160,517,418	\$ 23,225,469	\$ 135,072	\$ 23,360,541
Contract 302.06OO	Phase I CSO Facilities - OCIP Insurance	Yes	\$ 14,187,000	\$ 6,725,558	-	\$ 6,725,558
Contract 302.07C	Phase I CSO Facilities - Preparation of Workshaft Site Termination	Yes	\$ 438,600	\$ 305,583	\$ 7,448	\$ 313,031
Contract 302.08C	Phase I CSO Facilities - Overflows 004/061	Yes	\$ 7,370,355	\$ 1,148,948	\$ 175,064	\$ 1,324,012
Contract 302.09C	Phase I CSO Facilities - Overflow 009 and Emergency Overflow Structure	No	\$ 5,115,000	-	-	-
Contract 302.10C	Phase I CSO Facilities - Overflow 032	No	\$ 5,901,000	-	-	-
Contract 302.11C	Phase I CSO Facilities-Woonasquatucket Interceptor Relief	Advertised	\$ 4,025,000	-	\$ 1,891	\$ 1,891
Contract 302.12C	Phase I CSO Facilities - Overflow 067	No	\$ 4,900,000	-	-	-
Contract 302.13C	Phase I CSO Facilities - Regulator Modifications	No	\$ 1,430,000	-	-	-
Contract 302.14C	Phase I CSO Facilities - Tunnel Pump Station Fitout and Startup	No	\$ 30,281,000	-	-	-
Contract 302.15C	Phase I CSO Facilities - Overflows 006/007	Yes	\$ 8,894,444	-	\$ 85,894	\$ 85,894
Contract 302.20	Phase I CSO Facilities - Land Acquisitions RIDOT	Yes	\$ 3,000,000	\$ 3,000,000	\$ 54,085	\$ 3,054,085
Revised: 2/7/03		Totals =	\$ 281,751,638	\$ 44,658,940	\$ 652,172	\$ 45,311,112